L Number	Hits	Search Text	DB	Time stamp
2	4	seismic and determin$3 with (travel and time) and ray with correction and amplitude with correction and out$7 with data	USPAT; US-PGPUB	2004/02/20 10:36
3	4	seismic and determin$3 with (travel and time) and ray with correction and amplitude with correction	USPAT; US-PGPUB	2004/02/20 10:36
4	3	seismic with determin$3 with (travel and time) and ray with correction and amplitude with correction	USPAT; US-PGPUB	2004/02/20 10:37
5	6	determin$3 with (travel and time) and ray with correction and amplitude with correction	USPAT; US-PGPUB	2004/02/20 10:40
6	524	source and receiver and ray with (trace$3 or bend$3) and (v(z) or vti or f-k)	USPAT; US-PGPUB	2004/02/20 10:41
7	103	source and receiver and ray with (trace$3 or bend$3) and (v(z) or vti or f-k) and seismic with data	USPAT; US-PGPUB	2004/02/20 11:14
8	5	source and receiver and ray with (trace$3 or bend$3) and (v(z) or vti or f-k) and seismic with data and vti	USPAT; US-PGPUB	2004/02/20 11:15
9	10	source and receiver and ray with (trace$3 or bend$3) and (v(z) or vti or f-k) and seismic with data and (vertical and symmetry and axis or (vti))	USPAT; US-PGPUB	2004/02/20 11:16
10	6	source and receiver and ray with (trace$3 or bend$3) and (v(z) or vti or f-k) and seismic with data and (vertical with symmetry with axis or (vti))	USPAT; US-PGPUB	2004/02/20 11:17

US 20030074140A1

(19) United States

(12) Patent Application Publication (10) Pub. No.: US 2003/0074140 A1

MacKay (43) Pub. Date: Apr. 17, 2003

(54) DYNAMIC WATER VELOCITY CORRECTION

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(21) Appl. No.: 09/981,226

(22) Filed: Oct. 17, 2001

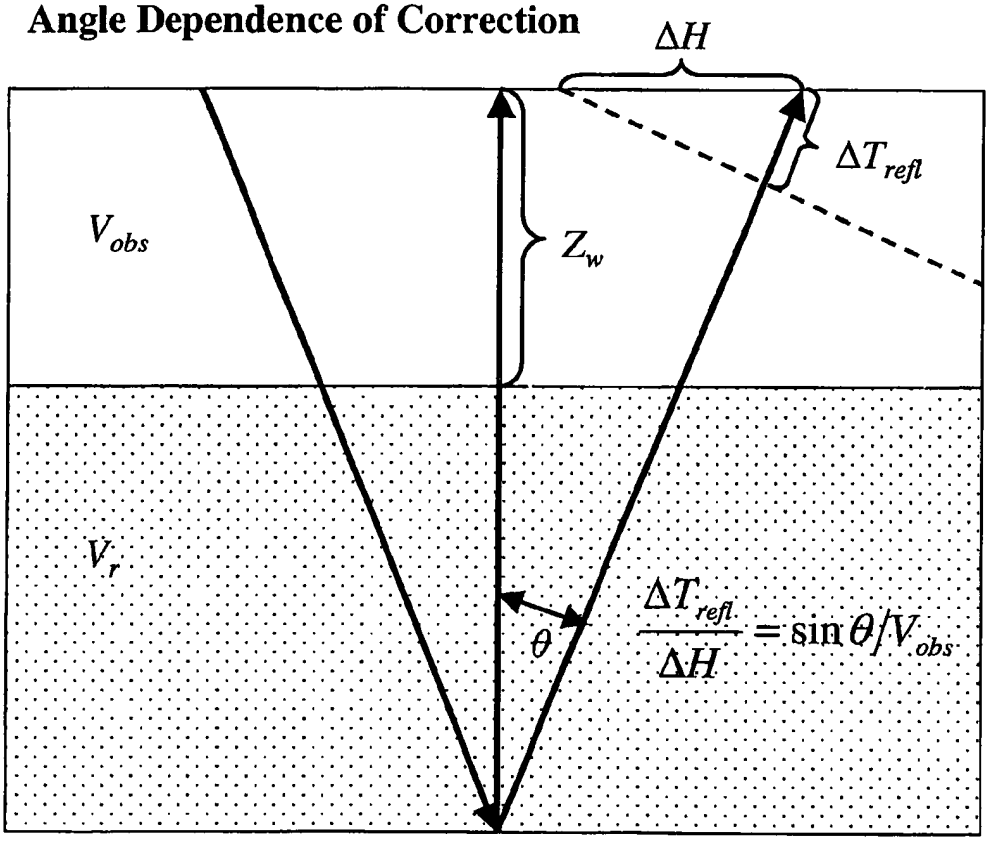
Publication Classification

(51) Int. Cl.[7] G01V 1/28

(52) U.S. Cl. 702/18

(57) ABSTRACT

This invention removes the effects of variable water velocity by calculating and applying corrections that map the seismic data to an ideal case of constant water velocity. All of the corrections assume, from a separate analysis step, that the vertical (zero-offset) timing errors induced by the water-velocity variations and that the zero-offset water bottom times are available. Equivalently, the water velocities are assumed known. The timing errors and water velocities are related. The zero-offset water-bottom times are also assumed available. From this information, and an arbitrarily-defined "ideal" water velocity, it is possible to calculate an observed (actual) water velocity relative to the "ideal" case. The only additional information needed is the angle of the ray path through the water layer. The angle may be calculated directly from normal moveout velocities derived from conventional analysis of the seismic data, and the information above. A time-dependent and offset-dependent correction may be derived for each sample of the seismic data prior to normal moveout correction.



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1	☐	☐	US 20030208321 A1	20031106	21	Relative true amplitude migration	702/14
2	☒	☐	US 5197039 A	19930323	22	Methods for processing seismic data	367/52
3	☒	☐	US 4935903 A	19900619	17	Reinforcement of surface seismic wavefields	367/24
4	☒	☐	US 4317369 A	19820302	25	Ultrasound imaging apparatus and method	73/607

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